

MINIATURIZED MULTI-GAS AND VAPOR SENSOR DEVICES
AND ASSOCIATED METHODS OF FABRICATION

ABSTRACT OF THE DISCLOSURE

The invention provides a miniaturized sensor device including a thin film membrane having a first surface and a second surface, one or more resistive thin film heater/thermometer devices disposed directly or indirectly adjacent to the first surface of the thin film membrane, and a frame disposed directly or indirectly adjacent to the second surface of the thin film membrane, wherein one or more internal surfaces of the frame define at least one cell having at least one opening. The sensor device also includes a thin film layer disposed directly or indirectly adjacent to the frame. The sensor device further includes a sensing layer disposed directly or indirectly adjacent to the thin film membrane.